

What is claimed is:

1. A method of characterizing objects generated during at least a partial run of  
5 a program, each object being characterized by a plurality of alternative  
properties which can be selected, said method comprising:

- a) instrumenting said at least partial run of said program to determine  
characterization information about each of said objects;
- b) determining a desirable property for said objects;
- 10 c) determining a correlation between said desirable property and said  
characterization information for each of said objects;
- d) using said correlation to select an property for an object subsequently created  
during an at least partial run of said program based upon characterization  
information about the subsequently created object.

15 2. A method as set forth in Claim 1, wherein the determining of an initial  
property in step (b) is carried out by minimizing total cost of interaction among  
components during at least a partial run of said program.

20 3. A method as set forth in Claim 1, wherein said characterization information of  
an object comprises at least one of said object's class, classification of said  
object's creator object, and a code identification of said object's creation site.

4. A method as set forth in Claim 1, wherein said alternative properties comprise a string representation selected from ASCII, EBCDIC, and UNICODE.

5 5. A method as set forth in Claim 1, wherein said alternative properties comprise a data structure selected from hash table, tree, and compressed data structures.

10 6. A computer readable medium including computer instructions executable on a computer for carrying out a method of characterizing objects generated during at least a partial run of a program, each object being characterized by a plurality of alternative properties which can be selected, said method comprising:

15 a) instrumenting said at least partial run of said program to determine characterization information about each of said objects;

b) determining a desirable property for each of said objects;

20 c) determining a correlation between said desirable property and said characterization information for each of said objects;

d) using said correlation to select an property for an object subsequently created during an at least partial run of said program based upon characterization information about the subsequently created object.

7. A computer readable medium as set forth in Claim 6, wherein the determining of an initial property in step (b) is carried out by minimizing total cost of interaction among components during at least a partial run of said program.

8. A computer readable medium as set forth in Claim 6, wherein said characterization information of an object comprises at least one of said object's class, classification of said object's creator object, and a code identification of said object's creation site.

9. A computer readable medium as set forth in Claim 6, wherein said alternative properties comprise a string representation selected from ASCII, EBCDIC, and UNICODE.

10. A computer readable medium as set forth in Claim 6, wherein said alternative properties comprise a data structure selected from hash table, tree, and compressed data structures.